

F X Timmes

List of Publications by Year in descending order

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53
papers

12,081
citations

109321

35
h-index

168389

53
g-index

53
all docs

53
docs citations

53
times ranked

6198
citing authors

#	ARTICLE	IF	CITATIONS
1	MODULES FOR EXPERIMENTS IN STELLAR ASTROPHYSICS (MESA): PLANETS, OSCILLATIONS, ROTATION, AND MASSIVE STARS. <i>Astrophysical Journal, Supplement Series</i> , 2013, 208, 4.	7.7	2,251
2	MODULES FOR EXPERIMENTS IN STELLAR ASTROPHYSICS (MESA): BINARIES, PULSATIONS, AND EXPLOSIONS. <i>Astrophysical Journal, Supplement Series</i> , 2015, 220, 15.	7.7	1,990
3	FLASH: An Adaptive Mesh Hydrodynamics Code for Modeling Astrophysical Thermonuclear Flashes. <i>Astrophysical Journal, Supplement Series</i> , 2000, 131, 273-334.	7.7	1,913
4	Modules for Experiments in Stellar Astrophysics ($\{M\}\{E\}\{S\}\{A\}$): Convective Boundaries, Element Diffusion, and Massive Star Explosions. <i>Astrophysical Journal, Supplement Series</i> , 2018, 234, 34.	7.7	1,182
5	Modules for Experiments in Stellar Astrophysics (MESA): Pulsating Variable Stars, Rotation, Convective Boundaries, and Energy Conservation. <i>Astrophysical Journal, Supplement Series</i> , 2019, 243, 10.	7.7	860
6	The Accuracy, Consistency, and Speed of an Electron-Positron Equation of State Based on Table Interpolation of the Helmholtz Free Energy. <i>Astrophysical Journal, Supplement Series</i> , 2000, 126, 501-516.	7.7	635
7	The Neutron Star and Black Hole Initial Mass Function. <i>Astrophysical Journal</i> , 1996, 457, 834.	4.5	300
8	The conductive propagation of nuclear flames. I - Degenerate C + O and O + NE + MG white dwarfs. <i>Astrophysical Journal</i> , 1992, 396, 649.	4.5	270
9	On Variations in the Peak Luminosity of Type Ia Supernovae. <i>Astrophysical Journal</i> , 2003, 590, L83-L86.	4.5	261
10	Integration of Nuclear Reaction Networks for Stellar Hydrodynamics. <i>Astrophysical Journal, Supplement Series</i> , 1999, 124, 241-263.	7.7	219
11	The Accuracy, Consistency, and Speed of Five Equations of State for Stellar Hydrodynamics. <i>Astrophysical Journal, Supplement Series</i> , 1999, 125, 277-294.	7.7	191
12	ADVANCED BURNING STAGES AND FATE OF 8-10 M_{\odot} STARS. <i>Astrophysical Journal</i> , 2013, 772, 150.	4.5	155
13	STARLIB: A NEXT-GENERATION REACTION-RATE LIBRARY FOR NUCLEAR ASTROPHYSICS. <i>Astrophysical Journal, Supplement Series</i> , 2013, 207, 18.	7.7	148
14	On Type Ia supernovae from the collisions of two white dwarfs. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2009, 399, L156-L159.	3.3	125
15	THE THREE-DIMENSIONAL EVOLUTION TO CORE COLLAPSE OF A MASSIVE STAR. <i>Astrophysical Journal Letters</i> , 2015, 808, L21.	8.3	125
16	TRENDS IN ^{44}Ti AND ^{56}Ni FROM CORE-COLLAPSE SUPERNOVAE. <i>Astrophysical Journal, Supplement Series</i> , 2010, 191, 66-95.	7.7	92
17	ON VARIATIONS OF PRE-SUPERNOVA MODEL PROPERTIES. <i>Astrophysical Journal, Supplement Series</i> , 2016, 227, 22.	7.7	92
18	THE $^{12}\text{C} + ^{12}\text{C}$ REACTION AND THE IMPACT ON NUCLEOSYNTHESIS IN MASSIVE STARS. <i>Astrophysical Journal</i> , 2013, 762, 31.	4.5	88

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19	The conductive propagation of nuclear flames. 2: Convectively bounded flames in C + O and O + NE + MG cores. <i>Astrophysical Journal</i> , 1994, 420, 348.	4.5	73
20	⁵⁶ Ni PRODUCTION IN DOUBLE-DEGENERATE WHITE DWARF COLLISIONS. <i>Astrophysical Journal</i> , 2010, 724, 111-125.	4.5	68
21	On the Observability of Individual Population III Stars and Their Stellar-mass Black Hole Accretion Disks through Cluster Caustic Transits. <i>Astrophysical Journal, Supplement Series</i> , 2018, 234, 41.	7.7	66
22	The Reduction of the Electron Abundance during the Pre-explosion Simmering in White Dwarf Supernovae. <i>Astrophysical Journal</i> , 2008, 677, 160-168.	4.5	59
23	ON CARBON BURNING IN SUPER ASYMPTOTIC GIANT BRANCH STARS. <i>Astrophysical Journal</i> , 2015, 807, 184.	4.5	59
24	The effect of ¹² C + ¹² C rate uncertainties on the evolution and nucleosynthesis of massive stars. <i>Monthly Notices of the Royal Astronomical Society</i> , 2012, 420, 3047-3070.	4.4	55
25	A highly magnified star at redshift 6.2. <i>Nature</i> , 2022, 603, 815-818.	27.8	53
26	EVALUATING SYSTEMATIC DEPENDENCIES OF TYPE Ia SUPERNOVAE: THE INFLUENCE OF PROGENITOR ²² Ne CONTENT ON DYNAMICS. <i>Astrophysical Journal</i> , 2009, 701, 1582-1604.	4.5	48
27	Skye: A Differentiable Equation of State. <i>Astrophysical Journal</i> , 2021, 913, 72.	4.5	45
28	Proton-rich Nuclear Statistical Equilibrium. <i>Astrophysical Journal</i> , 2008, 685, L129-L132.	4.5	44
29	BAYESIAN ESTIMATION OF THERMONUCLEAR REACTION RATES. <i>Astrophysical Journal</i> , 2016, 831, 107.	4.5	43
30	Physical Properties of Laminar Helium Deflagrations. <i>Astrophysical Journal</i> , 2000, 528, 913-945.	4.5	42
31	TURBULENT CHEMICAL DIFFUSION IN CONVECTIVELY BOUNDED CARBON FLAMES. <i>Astrophysical Journal</i> , 2016, 832, 71.	4.5	39
32	CONVECTIVE PROPERTIES OF ROTATING TWO-DIMENSIONAL CORE-COLLAPSE SUPERNOVA PROGENITORS. <i>Astrophysical Journal</i> , 2016, 822, 61.	4.5	38
33	PROPERTIES OF CARBON-OXYGEN WHITE DWARFS FROM MONTE CARLO STELLAR MODELS. <i>Astrophysical Journal</i> , 2016, 823, 46.	4.5	38
34	The Impact of Nuclear Reaction Rate Uncertainties on the Evolution of Core-collapse Supernova Progenitors. <i>Astrophysical Journal, Supplement Series</i> , 2018, 234, 19.	7.7	38
35	A TRACER METHOD FOR COMPUTING TYPE IA SUPERNOVA YIELDS: BURNING MODEL CALIBRATION, RECONSTRUCTION OF THICKENED FLAMES, AND VERIFICATION FOR PLANAR DETONATIONS. <i>Astrophysical Journal, Supplement Series</i> , 2016, 225, 3.	7.7	36
36	CONSTRAINTS ON EXPLOSIVE SILICON BURNING IN CORE-COLLAPSE SUPERNOVAE FROM MEASURED Ni/Fe RATIOS. <i>Astrophysical Journal</i> , 2015, 807, 110.	4.5	35

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37	ZERO IMPACT PARAMETER WHITE DWARF COLLISIONS IN FLASH. <i>Astrophysical Journal</i> , 2012, 759, 39.	4.5	33
38	Statistical methods for thermonuclear reaction rates and nucleosynthesis simulations. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2015, 42, 034007.	3.6	33
39	Observational Evidence for High Neutronization in Supernova Remnants: Implications for Type Ia Supernova Progenitors. <i>Astrophysical Journal</i> , 2017, 843, 35.	4.5	33
40	Neutrinos from Beta Processes in a Presupernova: Probing the Isotopic Evolution of a Massive Star. <i>Astrophysical Journal</i> , 2017, 851, 6.	4.5	32
41	Observing Intermediate-mass Black Holes and the Upper Stellar-mass gap with LIGO and Virgo. <i>Astrophysical Journal</i> , 2022, 924, 39.	4.5	32
42	Presupernova Neutrinos: Directional Sensitivity and Prospects for Progenitor Identification. <i>Astrophysical Journal</i> , 2020, 899, 153.	4.5	26
43	The Impact of White Dwarf Luminosity Profiles on Oscillation Frequencies. <i>Astrophysical Journal Letters</i> , 2018, 867, L30.	8.3	22
44	ON MEASURING THE METALLICITY OF A TYPE IA SUPERNOVA'S PROGENITOR. <i>Astrophysical Journal</i> , 2016, 824, 59.	4.5	20
45	Stable nickel production in type Ia supernovae: A smoking gun for the progenitor mass?. <i>Astronomy and Astrophysics</i> , 2022, 660, A96.	5.1	16
46	On Stellar Evolution in a Neutrino Hertzsprung-Russell Diagram. <i>Astrophysical Journal</i> , 2020, 893, 133.	4.5	15
47	On the Impact of ^{22}Ne on the Pulsation Periods of Carbon-Oxygen White Dwarfs with Helium-dominated Atmospheres. <i>Astrophysical Journal</i> , 2021, 910, 24.	4.5	14
48	On the Structure, Magnetic Properties, and Infrared Spectra of Iron Pseudocarbonyls in the Interstellar Medium. <i>Astrophysical Journal</i> , 2019, 879, 2.	4.5	11
49	Quantifying How Density Gradients and Front Curvature Affect Carbon Detonation Strength during SNe Ia. <i>Astrophysical Journal</i> , 2019, 871, 154.	4.5	9
50	Editorial: Data: Insights and Challenges in a Time of Abundance. <i>Astrophysical Journal, Supplement Series</i> , 2018, 236, 1.	7.7	4
51	Laminar Flame Speeds in Degenerate Oxygen-Neon Mixtures. <i>Astrophysical Journal</i> , 2020, 891, 5.	4.5	3
52	CNO Cycle Burning in Ultra-low Metallicity Solar Mass Stars. <i>Research Notes of the AAS</i> , 2020, 4, 172.	0.7	1
53	Modifying the Free Energy in Skye. <i>Research Notes of the AAS</i> , 2022, 6, 43.	0.7	1